

# NASA TECH BRIEF



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## Film Coating Permits Low-Force Scribing

### The problem:

In using coated films for scribed recordings of instrumentation, considerations of the force required for clear-cut scribing and the characteristics of the residue formed are of considerable interest. High scribing forces impose power and mechanical problems while abrasive scribe residue may damage close tolerance surfaces.

### The solution:

A film coating that requires low scribing force as first deposited, that is relatively unaffected by aging, and that gives off a soft, fine scribe residue containing a proven lubricant.

### How it's done:

A commercially available transparent film is coated with a solvent-drying opaque system containing a dispersed solid pigment phase, a continuous binder phase, and a fluorocarbon telomer having low intra-particle cohesive strength and very low bonding attraction to all other substances. This latter acts as a shear-strength reducing filler that is a lubricant for the

scribe tool and any surfaces contacted by the residue. In curing, the solvent (polyisobutylene) improves film coating flexibility and scribing qualities.

### Notes:

1. This should provide an improved coating for scribe-able graphic transparencies.
2. Inquiries concerning this invention may be directed to:

Technology Utilization Officer  
Manned Spacecraft Center  
Houston, Texas 77058  
Reference: B66-10609

### Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

Source: Robert Willing  
of North American Aviation, Inc.  
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Category 03